UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,189	03/22/2006	Masahiro Ono	19273	9351

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EXAMINER
SHEDRICK, CHARLES TERRELL

ART UNIT	PAPER NUMBER
2617	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/573,189	ONO ET AL.
	Examiner	**Art Unit**	
	CHARLES SHEDRICK	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims are rejected under 35 U.S.C. 102(b) as being anticipated by Malki et al. US patent Pub.

No.: 2001/0046223 A1, hereinafter, "Malki".

Consider **claims 1, 8, 15, 18, 25 and 28**, Malki teaches a method, control program (note:

hereinafter interpreted as being <u>stored</u> on computer readable medium) and a mobile

communication system composed of a home agent(**e.g., 345 of figure 3**), a mobile node(**e.g.,**

mobile node 305 of figure 3), and one or more correspondent nodes (**e.g., 335 of figure 3**),

wherein said mobile node comprises: means for storing a preassigned representative home

address, **<u>0</u>** or more preassigned subsidiary home addresses(**e.g., hierarchy address structure as**

noted in paragraphs 0012 and 0031 or 0 or more home addresses formed by the home agent

as noted in at least paragraph 0046 furthermore it is understood that the subsidiary home

addresses are essentially "temporary" addresses based on the dynamic allocation(e.g.,

assign and return) of the subsidiary home address), and a care-of address temporarily

assigned in a network in which the mobile node is currently present(**e.g., see storage means**

referenced in at least paragraphs 0040-0041, paragraphs 0031-0032 discusses the home

address, the equivalent of home subsidiary addresses such as registering w/ multiple

anchor node RC/O address and LC/O address, 0056 discusses the ability to store future

address, multiple c/o address in at least paragraph 0058 and home addresses again in at

least paragraph 0046. note that the anchor point is sw or hw); and means for making a

registration request for joint information which relates the representative home address to all

subsidiary home addresses and the care-of address to said home agent, each time the mobile node

moves to other network, and is assigned a new care-of address(**e.g., binding all address**

information and performing binding updates when the information changes as noted in a

at least the background 0009 which discusses the ability to bind multiple addresses in

previous mobility systems and paragraphs 0032,0045-0046, 0049 and 0056 which refers to

binding multiple addresses including home, home subsidiary and c/o addresses), and

wherein said home agent comprises: means for receiving the registration request for said joint

information(**e.g., paragraph 0032 indicates the binding updates are sent to the Home agent**

), and if a packet destined for the representative address or any secondary address arrives from

any correspondent node, retrieving the joint information including the representative home

address or the subsidiary home address, from a table in which the joint information is registered

(**i.e., the binding cache as noted in at least paragraphs 0009 and 0032**), and transferring the

packet to the care-of address corresponding to the address for which the packet is destined(**e.g.,**

at least paragraph 0032 teaches packets are routed to mobile node via alternate c/0 address

which corresponds to the mobility anchor point with which the mobile node had registered,

i.e., the RCOA. see also paragraph 0046 and figures 0010-0011).

Consider **claims 2, 9, 16, 19 and 26 and as applied to claims 1, 8, 15, 18 and 25** Malki

teaches wherein said mobile node comprises: means for registering a part of the subsidiary home

addresses owned by said mobile node at the time of processing of the registration of said joint

information, and managing the remaining as unregistered subsidiary home addresses(**e.g., the mobile node may have multiple home address and manages the address accordingly as noted in at least paragraph 0046-0047. furthermore Malki teaches support for N level hierarchy as noted in at least paragraphs 0012 and 0031. one of ordinary skill in the art would recognized that the pool of subsidiary addresses are actually a pool of temporary addresses binding additional addresses**);means for requesting additional registration of the unregistered subsidiary home addresses to the home agent at a given point in time (**e.g., registering with additional mobility anchor points as noted in at least paragraphs 0046-0047, 0059-0060 and as described with respect to at least figure 7 where the mobility anchor point registration is discussed**); and

means for requesting deregistration of the registered subsidiary home addresses to the home agent (**e.g., deregistration can occur via a binding update as discussed in at least paragraph 0047, 0049 and 0057 and/or by setting the life time bit**), and wherein, if additional registration of a subsidiary home address is requested from the mobile node, said home agent comprises:

means for adding the address to the corresponding joint information of the mobile node(**e.g., registering with additional mobility anchor points as noted in at least paragraphs 0046-0047, 0059-0060 and as described with respect to at least figure 7 where the mobility anchor point registration is discussed**); and if the deregistration of the subsidiary home address is requested, means for erasing the address from the corresponding joint information of the mobile node(**e.g., deletion from binding cache can occur via a binding update as discussed in at least paragraph 0045-0047, 0049 and 0057 and/or by setting the life time bit**), whereby the number of the subsidiary home addresses which will be used, out of the subsidiary home

addresses owned by said mobile node may be dynamically changed(**e.g., at least paragraphs 0031-0032 0045-0047 teaches multiple address mgmt and binding updates to dynamically change the existing information**).

Consider **claims 3, 10, 17 , 20, 27 and 30 and as applied to claims 1,8, 15, 18 and 25** Malki teaches wherein said mobile node comprises: means for requesting an assignment of a new subsidiary home address to the home agent(**e.g., registering with additional mobility anchor points as noted in at least paragraphs 0046-0047, 0059-0060 and as described with respect to at least figure 7 where the mobility anchor point registration is discussed**); and means for returning the assigned subsidiary home address(**e.g., at least paragraphs 0031-0032 0045-0047 teaches multiple address mgmt and binding updates to dynamically change the existing information**), and wherein, if the assignment of the new subsidiary home address is requested from the mobile node, said home agent comprises: means for selecting arbitrary address from an unassigned address group owned by the home agent to register this address with the joint information of the mobile node (**e.g., 0 or more home addresses formed by the home agent as noted in at least paragraph 0046. Although the claim limitation indicates that the selection is arbitrary, the Examiner respectfully request that the Application carefully consider the term "arbitrary" within the context. In other selecting an arbitrary address from a "structured" pool of addresses is somewhat contradictory**), and notifying the mobile node of it; and if the assigned subsidiary home address is returned from the mobile node, means for returning this to the unassigned addresses (**i.e., the address can be used within the network without conflict or readdressed**), and erasing this from the joint information of the mobile node(**i.e., a binding update**), whereby the number of the subsidiary home addresses owned by

the mobile node may be dynamically changed(**e.g., at least paragraphs 0031-0032 0045-0047 teaches multiple address mgmt and binding updates to dynamically change the existing information**).

Consider **claims 4, 11 and 21 and as applied to claims 1**, **8 and 18,** Malki teaches a plurality of mobile network nodes being located under said mobile node(**e.g., see at least figure 3**), these constituting a local network with said mobile node as a router, wherein said mobile node comprises: means for assigning the subsidiary home addresses to the mobile network nodes(**i.e., N level hierarchy as noted in at least paragraphs 0012 and 0031. one of ordinary skill in the art would recognized that the pool of subsidiary addresses are actually a pool of temporary addresses binding additional addresses**), and if a packet destined for the subsidiary home address assigned to the mobile network nodes arrives, transferring this to the corresponding mobile network node (**e.g., see routing as noted in at least paragraph 0032 with respect to the supporting features noted in at the background paragraphs 0031, 0012 and 0009**), whereby said mobile node performs location registration for the mobile network nodes in the local network managed by said mobile node by proxy, and transfers the packet destined for the mobile network node(**e.g., each node acts as proxy with respect to the mappings as noted in at least paragraph 0032 with respect to the supporting features noted in at the background paragraphs 0031, 0012 and 0009**).

Consider **claims 5, 12, 22 and 29 and as applied to claims 4, 11, 21 and 25**, Malki teaches wherein if a new mobile network node is added within the local network, and the mobile network node requests an assignment of an address to the mobile node, said mobile node comprises: means for assigning any unregistered subsidiary home address to the mobile network

node (**e.g., 0 or more home addresses formed by the home agent as noted in at least**

paragraph 0046.), and requesting additional registration of this subsidiary home address to the

home agent(**i.e., binding updates of the RCOA with the homes address as noted in at least**

paragraphs 0045-0047); and if the mobile network node is deleted from within the local

network, and the mobile network node notifies the mobile node of returning the subsidiary home

address, means for requesting deregistration of this subsidiary home address (**i.e., binding**

update of all binding caches of the RCOA with the homes address as noted in at least

paragraphs 0045-0047), whereby the number of registration of the subsidiary home addresses

owned by the mobile node is dynamically increased or decreased according to the added or

deleted mobile network nodes(**i.e., binding update of all binding caches of the RCOA with**

the homes address as noted in at least paragraphs 0045-0047.

Consider **claims 6, 13 and 23 and as applied to claims 4, 11 and 21,** Malki teaches,

wherein, if a new mobile network node is added within the local network managed by the mobile

node, and the mobile network node requests an assignment of an address to the mobile node, said

mobile node comprises: means for acquiring a new subsidiary home address from the home

agent(**i.e., binding update of all binding caches of the RCOA with the homes address as**

noted in at least paragraphs 0045-0047. see 0046 in particular), and assigning this to the

mobile network node(**i.e., binding update of all binding caches of the RCOA with the homes**

address as noted in at least paragraphs 0045-0047); and if the mobile network node is deleted

from within the local network managed by the mobile node, and the mobile network node

notifies the mobile node of returning the subsidiary home address, the mobile node comprises:

means for returning the subsidiary home address to the home agent, whereby the number of the

subsidiary home addresses owned by the mobile node is dynamically increased or decreased according to the added or deleted mobile network nodes**(i.e., binding update of all binding caches of the RCOA with the homes address as noted in at least paragraphs 0045-0047)**.

Consider **claims 7, 14 and 24 and as applied to claims 1**, **8 and 18**, Malki teaches wherein, if the representative home address and any number of the subsidiary home addresses are simultaneously registered, updated, or deleted with respect to the home agent, said mobile node comprises means for transmitting information on all addresses in one message to the home agent**(i.e., binding update as noted in at least paragraphs 0045-0047)**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES SHEDRICK whose telephone number is (571)272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles   Shedrick/
Examiner, Art Unit 2617

/Lester Kincaid/
Supervisory Patent Examiner, Art Unit 2617